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## PATENT APPLICATION

ATTORNEY DOCKET NO. 200311960-1

**IN THE**  
**UNITED STATES PATENT AND TRADEMARK OFFICE**

**Inventor(s):** KARLSSON et al.

**Confirmation No.:**

~~Form 1~~ Application No.: 10/698,263

**Examiner:**

**Filing Date:** 10/30/2003

### Group Art Unit:

## **Title:** METHOD OF DETERMINING BOUNDS FOR MINIMUM COST

## COMMISSIONER FOR PATENTS

Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

This Information Disclosure Statement is submitted:

(X) under 37 CFR 1.97(b), or  
(Within three months of filing national application; or date of entry of national application; or before mailing date of first office action on the merits; whichever occurs last)

( ) under 37 CFR 1.97 (c) together with either a:  
( ) Statement under 37 CFR 1.97(e), or  
( ) a \$180.00 fee under 37 CFR 1.17(p), or  
(After the CFR 1.97 (b) time period, but before final action or notice of allowance, whichever occurs first)

( ) under 37 CFR 1.97 (d) together with a:  
( ) Statement under 37 CFR 1.97(e)(1) or (2), and  
( ) a \$180.00 fee set forth in 37 CFR 1.17(p).  
(Filed after final action, a notice of allowance, on or before before payment of the issue fee)

Please charge to Deposit Account **08-2025** the sum of **\$0.00**. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account **08-2025** pursuant to 37 CFR 1.25.

Applicant(s) submit herewith Form PTO 1449 - Information Disclosure Citation together with copies, of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

( ) A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form 1449, as presently understood by the individuals(s) designated in 37 CFR 1.56 (c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO 1449 and is enclosed herewith.

It is requested that the information disclosed herein be made of record in this application.

**(X)** I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450

Respectfully submitted,

KARLSSON et al.

By   
**Derek J. Westberg**  
Attorney/Agent for Applicant(s)  
Reg. No. 40,872

Date: 02/05/2004

Telephone No.: (408) 293-9000



## **PATENT APPLICATION**

Sheet 1 of 7

FORM PTO-1449

**LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENT**

(Use several sheets if necessary)

ATTY. DOCKET NO.  
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KARLSSON et al.

**FILING DATE**

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## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

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	1L					
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**OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)**

1Q	Sugih JAMIN, Cheng JIN, Anthony R. KURC, Danny RAZ and Yuval SHAVITT, Constrained Mirror Placement on the Internet, INFOCOM, 2001.
1R	Magnus KARLSSON and Christos KARAMANOLIS, Bounds on the Replication Cost for QoS, Technical Report HPL-2003-156, Hewlett-Packard Company, Palo Alto, CA, July 24, 2003. < <a href="http://www.hpl.hp.com/techreports/2003/HPL-2003-156.pdf">http://www.hpl.hp.com/techreports/2003/HPL-2003-156.pdf</a> >
1S	Lili QIU, Venkata N. PADMANANABHAN and Geoffrey M. VOELKER, On the Placement of Web Server Replicas, INFOCOM, 2001.

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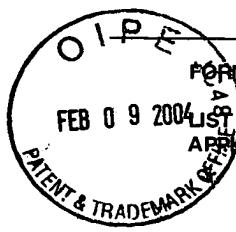
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2Q	Raj TEWARI and Nabil R. ADAM, Distributed File Allocation with Consistency Constraints, 1992.
2R	Arun VENKATARAMANI, Phoebe WEIDMANN, and Mike DAHLIN, Bandwidth Constrained Placement in a WAN, 2001.
2S	Alec WOLMAN, Geoffrey M. VOELKER, Nitin SHARM, Neal CARDWELL, Anna KARLIN, and Henry M. LEVY, On the Scale and Performance of Cooperative Web Proxy Caching, Proceedings of the 17th ACM Symposium on Operating Systems Principles, Kiawah Island, SC, pages 16-31, ACM Press, New York, NY, 1999.

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3Q	Kamal JAIN, Mohammad MAHDIAN, Evangelos MARKAKIS, Amin SABERI, and Vijay V. VAZIRANI, Greedy Facility Location Algorithms Analyzed Using Dual Fitting With Factor-Revealing LP, ArXiv, Cornell University, Ithica, NY, July 9, 2002. < <a href="http://arxiv.org/PS_cache/cs/pdf/0207/0207028.pdf">http://arxiv.org/PS_cache/cs/pdf/0207/0207028.pdf</a> >
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3S	Magnus KARLSSON, Christos KARAMANOLIS, and Mallik MAHALINGAM, A Framework for Evaluating Replica Placement Algorithms, Technical Report, HPL-2002-219, Hewlett-Packard Company, Palo Alto, CA, August 16, 2002. < <a href="http://www.hpl.hp.com/techreports/2002/HPL-2002-219.pdf">http://www.hpl.hp.com/techreports/2002/HPL-2002-219.pdf</a> >

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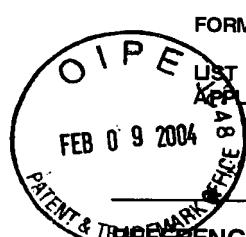
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4S	Haifeng YU, and Amin VAHDAT, Minimal Replication Cost for Availability, July 2002.

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FILING DATE <b>10/30/2003</b>	GROUP	

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5Q	Samy MAHMOUD and J. S. RIORDON, Optimal Allocation of Resources in Distributed Information Networks, ACM Transactions on Database Systems, Volume 1, Number 1, pages 66-78, ACM Press, New York, NY, March 1976.
5R	Mark S. DASKIN and Susan H. OWEN, Partial Covering P-Center and Partial Covering Set Covering Models, Presentation, International Symposium on Location Decisions (ISOLDE VIII), Portugal, June, 23-29, 1999.
5S	Susan Hesse OWEN and Mark S. DASKIN, Strategic Facility Location: A Review, Volume 111, Issue 3, pages 423-447, European Journal of Operational Research, Elsevier Science B.V., Amsterdam, Netherlands, 1998.

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6Q	Lawrence W. DOWDY, Derrell V. FOSTER, Comparative Models of the File Assignment Problem, ACM Computing Surveys (CSUR), Volume 14, Number 2, Pages 287 - 313, ACM Press, New York, NY, June 1982.
6R	Pierre CHARDAIRE, Facility Location Optimization and Cooperative Games, Ph.D. Thesis, pages 46-62, Chapter 3 and Pages 175-184, Bibliography, School of Information Systems, University of East-Anglia, Norwich UK, 1998.
6S	Magnus KARLSSON, Christos KARAMANOLIS, 10/698,182, October 30, 2003. (Attorney Docket Number 200311961-1)

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## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

7Q	Christos KARAMANOLIS, and Magnus KARLSSON, 10/698,264, October 30, 2003. (Attorney Docket Number 200311962-1)
7R	Magnus KARLSSON and Christos KARAMANOLIS, 10/698,265, October 30, 2003. (Attorney Docket Number 200312448-1)
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## TRANSMITTAL FORM

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	Filing Date	October 30, 2003
	First Named Inventor	KARLSSON et al.
	Art Unit	
	Examiner Name	
Total Number of Pages in This Submission	200311960-1	

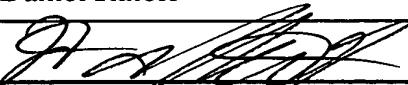
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Remarks		

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Derek J. Westberg (Reg. No. 40,872)	
Signature		
Date	Feb 5, 2004	

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Typed or printed name	Daniel Ratoff	
Signature		Date
	Feb 5, 2004	

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